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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Masahiko MAEDA et al.

Group Art Unit: 1773

Serial Number: 09/762,441

Examiner: Ramsey E. ZACHARIA

Filed: February 8, 2001

For: LEATHER COATED WITH FLUORINE-CONTAINING RESIN

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner

Washington, D.C. 20231

Sir,

Akihiko UEDA, citizen of Japan, duly deposes and says:

- 1. That he has graduated from Master Course of Department of Applied Chemistry in College of Technologies of University of OSAKA Prefecture, Japan, in the year of 1986;
- 2. That he was employed in his capacity since 1986 by DAIKIN INDUSTRIES, LTD.;
- 3. That he has been engaged in research and development on an fluorine-containing resin coating composition and its application;
- 4. That he has read and is familiar with the instant application for United States Letters Patent and the Office Action thereto mailed August 23, 2004;
- 5. That he experimented and proved that the tetrafluoroethylene resin coating composition having hydroxyl group

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and chlorotrifluoroethylene resin coating composition having hydroxyl group can give the coated leather having more excellent stain-removing property and ethanol resistance than the leather coated with a vinylidene fluoride resin coating composition having hydroxyl group.

EXPERIMENTAL

COMPARATIVE EXAMPLE A

A white leather coated with a fluorine-containing resin coating composition and a dark blue leather coated with a fluorine-containing resin coating composition were produced in the same manner as in EXAMPLE 1 of USSN 09/762,441 except that the vinylidene fluoride resin having the following formulation was used as the curable fluorine-containing resin and mixed with a curing agent (CORONATE HX) in a ratio of NCO/OH=1. A stain removing test, cold resistance test, flexing fatigue resistance test and ethanol resistance test were carried out in the same manner as in EXAMPLE 1 of USSN 09/762,441.

Formulation of the vinylidene fluoride (VdF) resin having hydroxyl group was a copolymer of VdF/hexafluoropropylene(HFP)/4-hydroxybutyl vinyl ether(HBVE)/vinyl pivalate = 72/7/11/10 (molar ratio) having a hydroxyl value of 75 mgKOH/g.

RESULTS

The results are shown in TABLE A together with the results of EXAMPLEs 1 for TFE resin, and 7 and 13 for CTFE resin.

	Com	Com. EX. A	Œ	EX.1	Ex.7	EX.13
	VdF	VdF resin	TFE	TFE resin	CTFE	CTFE resin
Coating amount (g/m^2)	7	10	2	10	7	10
Stain removing test						
Rouge/detergent	4	4	1 -5	S	4-5	ഗ
Rouge/cleaner for leather	4	4	5-4	ល	1	ı
Mustard/detergent	4	4	4	ญ		1
Mustard/cleaner for leather	4	4	4-5	Ŋ	1	•
Ink of ball-point pen/detergent	4	4	4	4		ı
Ink of ball-point pen/cleaner for leather	4	4	4-5	5	4	4-5
Ethanol resistance test (area % of coating film chipped off)	50	25	50	0	50	10
Cold resistance test (Cracking of coating film	Nil	Nii	Nii	Nii	Nii	Nii
Flexing fatigue resistance test (Cracking of coating film)	Nïï	Nil	Nii	Nii	Nii	Nii

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DISCUSSION

As is clear from the results of TABLE A, the TFE resin and CTFE resin are superior to the VdF resin in stain removing property and ethanol resistance. With respect to the VdF resin, even when a thickness of the coating film is made thicker, the stain removing property is not changed.

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The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

This 17th day of February, 2005

by Ukihiko Vada

Akihiko UEDA

We, the undersigned witnesses, hereby acknowledge that Akihiko UEDA is personally known to us and did execute the foregoing Declaration in our presence on:

Date: February 17, 2005 Witness Will W

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Date: February 17, 2005 Witness

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